

Central Office DC/DC converter for 380 V_{DC} distribution systems

This Flatpack2 DC/DC converter provides a secondary 310-400 V_{DC} output from a main 48V or 60V battery bank.

This allows for high efficient transmission of battery backed up energy to small remote sites without grid.

The galvanic isolated CAN bus allows for direct connection to the controller in a supplying Eltek power system. Advanced monitoring and control can then be achieved without adding a separate controller.



Flatpack2 DC/DC Converter

DC/DC 42-75/380 1350

Doc 241115.615.DS3 – v1.1

APPLICATIONS

TELECOM - FIXED

- Central office
- Distribution hubs

TELECOM – MOBILE / WIRELESS

- Distributed antenna systems



6U System

KEY FEATURES

- WIDE INPUT RANGE
- ORING PROTECTION ON OUTPUT
- BOOST MODE
- HIGH EFFICIENCY
- MODULE KEYING
- SEAMLESSLY INTEGRATED IN CONTROL SYSTEM



Smartpack2 System controller



Flatpack2 DC/DC Power rack (PN: 324654)



Status of DC/DC converters in Smartpack2 web

Flatpack2 DC/DC Converter



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MODEL	DC/DC 42-75/380 1350	
Part number	241115.615	
INPUT DATA		
Voltage range	42 - 75 V _{DC} (shutdown < 39V _{DC})	
Current (maximum)	38 A _{DC} (62 A _{DC} during boost)	
Protection	Fuse in negative	
OUTPUT DATA		
Voltage (default)	400 V _{DC}	
Voltage (adjustable range)	310 - 400 V _{DC}	
Power continuous (maximum)	1350 W	
Power boost 15s / 10min recovery	2250 W	
Constant power limit	V _{OUT} > 300 V _{DC}	
Current (maximum)	4.5 A	
Current boost 15s / 10min recovery (maximum)	7.5 A	
Constant current limit	V _{OUT} < 300V _{DC}	
Static Voltage regulation (0 - 100% load)	±0.5%	
Ripple, 20MHz bandwidth	< 1000 mV _{pp}	
Dynamic Voltage regulation	±5.0% for 10-90% or 90-10% load variation, regulation time < 30ms	
Protection	Short circuit proof, Shutdown if V _{OUT} < 300 V _{DC} for 5s (power cycle to restart), OR-ing diode, High temperature protection, Hot plug-in inrush current limiting, Selective over voltage Shutdown	
OTHER SPECIFICATIONS		
Efficiency	Up to 94.5 %	
Isolation	0.71 kV _{DC} - input to chassis 4.2 kV _{DC} - input to output 2.2 kV _{DC} - output to chassis	0.71 kV _{DC} - CAN/Alarm to chassis 0.71 kV _{DC} - CAN/Alarm to input 4.2 kV _{DC} - CAN/Alarm to output
Alarms: Red LED	Low and high input voltage shutdown, High and low temperature shutdown, Converter Failure, Overvoltage shutdown on output, Fan failure, Low output voltage alarm (V _{OUT} < 300 V _{DC})	
Warnings: Yellow LED	Converter in power derate mode, Remote output current limit activated, Input voltage out of range, flashing at overvoltage, Loss of CAN communication with controller	
Normal operation: Green LED		
Alarm relay (NC)	Closes on Alarms (as specified above) and missing supply voltage. [max 75 V _{DC} / 100 mA]	
MTBF (Telcordia SR-332 Issue I method III (a))	>295 000h (@ T _{ambient} : 25 °C)	
Operating temperature	-40 to +75°C (-40 to +167°F), humidity 5 - 95% RH non-condensing	
Temperature de-rating above 55°C (131°F)	1350W to 800W @ 75°C (167°F)	
Storage temperature	-40 to +85°C (-40 to +185°F), humidity 0 - 99% RH non-condensing	
Dimensions[WxHxD] / Weight	109 x 41.5 x 327mm (4.25 x 1.69 x 13") / < 1.95 kg (4.3 lbs)	
DESIGN STANDARDS		
Electrical safety	UL 60950-1:2011, EN 60950-1:2006+A11:2009+A1:2010+A12:2011	
EMC	ETSI EN 300 386 v1.6.1, FCC CFR 47 Part 15:2013 EN 61000-6-1:2007, -6-2:2005, -6-3:2007 + A1:2010, -6-4:2007 + A1:2010	
Environment	ETSI EN 300 019: 2-1 (Class 1.2), 2-2 (Class 2.3) & 2-3 (Class 3.2) RoHS (2011/65/EU) and WEEE (2002/96/EC) compliant	

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Specifications are subject to change without notice